

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE

PAGE OF PAGES

1 11

2. AMENDMENT/MODIFICATION NO.

113

3. EFFECTIVE DATE

See Block 16C

4. REQUISITION/PURCHASE REQ. NO.

5. PROJECT NO. (If applicable)

ISSUED BY

CODE

John F. Kennedy Space Center, NASA
Procurement Office – ODIN – OP-OS-ODIN
Kennedy Space Center, FL 32899

7. ADMINISTERED BY (If other than Item 6)

CODE

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State, and Zip Code)

OAO Corporation
7375 Executive Place
Seabrook, MD 20706-2278

(x)

9A. AMENDMENT OF SOLICITATION NO.

9B. DATED (SEE ITEM 11)

10A. MODIFICATION OF CONTRACT/ORDER NO.

NAS5-98144/CC90303B

10B. DATED (SEE ITEM 13)

December 1, 2001

CODE

FACILITY CODE

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

[] The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers [] is extended, [] is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning ____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.

B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).

X

C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:

NAS5-98144 Contract Clause C.7 Technology Refreshment Process and FAR Clause 52.212-4 Contract Terms and Conditions-Commercial Items, (c) Changes

D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor [] is not, [X] is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

Stennis Space Center --- ODIN SERVICES

Technology Infrastructures: SWRs P203 4212 F5, P203 4213 02, P203 4213 04, XGJC 4491 00

Change in Delivery Order Price: \$172,236.95 (INCREASE)

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)

Keith L. Spencer
Sr. Contracts Manager

16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)

Penelope A. Ebright
Contracting Officer

15B. CONTRACTOR/OFFEROR

15C. DATE SIGNED

16B. UNITED STATES OF AMERICA

16C. DATE SIGNED

(Signature of person authorized to sign)

2 APR 2004

BY

(Signature of Contracting Officer)

4/5/2004

NSN 7540-01-152-8070

30-105

STANDARD FORM 30 (Rev. 10-83)

Prescribed by GSA
FAR (48 CFR) 53.243

DUS EDITION UNUSABLE

1. In accordance with Master Contract NAS5-98144, C.7, Technology Refreshment Process, the technology refreshment services referenced below is hereby incorporated into this Delivery Order at a fixed price of \$172,236.95

SWR #	Subject	Amount
P203 4212 F5	Install 24-port 10/100 network switches to accommodate Victim/Guest Network connections in buildings B1100S 1 st and 2 nd , B1100 rooms C116, 203, 306H and 345, B1105 rooms C313 and F604, B1200 room 204D and B4220, level 5	\$34,225.78
P203 4213 02	Replace Cat3 wiring in B3101 with Cat6 wiring and install singlemode fiber cable between B2310 and B3101 to support new network hub	\$26,895.03
P203 4213 04	Replace Cat3 network wiring with Cat6 wiring and replace Cat3 telephone wiring with new Cat3 wiring in B2108	\$31,903.12
XGJC 4491 00 Rev 1 (dually funded with XJDE 4491 00)	Install fiber cable between B5100 and B9801 to provide telecommunications and network connections to B9801 for NASA	\$79,213.02
	Total	\$172,236.95

2. SWR P203 4212 F5

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install GFE provided 24-port 10/100 network switches to accommodate Victim/Guest Network connections in buildings B1100S 1st and 2nd, B1100 rooms C116, 203, 306H and 345, B1105 rooms C313 and F604, B1200 room 204D and B4220, level 5 as outlined in OAO proposal dated February 3, 2004.

- a. The contractor (and its subcontractor) shall perform the following tasks:

OAO to work:

- (1) Install one GFE Cisco 2950C-24 on level 5 of B4220 and connect to the victim net switch in 1201.
- (2) Install one GFE Cisco 2950C-24 in room C116 of B1100 Conference Center and connect to the victim net switch in 1201.
- (3) Install one GFE Cisco 2950C-24 in room 11128 of B1100 South and connect to the victim net switch in 1201.
- (4) Install one GFE Cisco 2950C-24 in room 22228 of B1100 South and connect to the victim net switch in 1201.
- (5) Install one GFE Cisco 2950C-24 in room C313 of B1105 and connect to the victim net switch in 1201.
- (6) Install one GFE Cisco 2950C-24 in room F604 of B1105 and connect to the victim net switch in 1201.
- (7) Install one GFE Cisco 2950C-24 in room 204D of B1200 and connect to the victim net switch in 1201.
- (8) Move users currently on the victim net in these locations to the new GFE switches.
- (9) Update databases
- (10) Update network drawing

- (11) Update network security plan

BOE-TEL to work:

- (1) Install one 6-strand multimode cable from room C116 in Conference Center to room 241 in building 1100.
- (2) Install one 12-strand singlemode cable from room C116 in Conference Center to room 241 in building 1100.
- (3) Install one 12-strand single-mode cable from room F604 to RM C313 in building 1105.
- (4) Install one 12-strand multimode cable from room C311 to room C313 in building 1105.
- (5) Install one 12-strand singlemode cable from room B105E to room 204D in building 1200.
- (6) Install 24 cables to each of the new GFE switches in the following locations: level 5 in 4220, room C116 in 1100 Conference Center, room 11128 on 1100S 1st floor and room 22228 on 1100 2ND floor, rooms 203, 306H and 345 in 1100, room C311 to room C313 in 1105, room C313 to room F604 in 1105, and room B105E to room 204D in 1200.
- (7) Terminate all level 7 solid copper cords on 110 wiring blocks in the same rooms. The only exceptions will be the following: (a) none in room C311 and (b) there will be (24) on level 5 of building 4220.
- (8) Test and label fiber at both ends at all locations.
- (9) Label level 7 wiring at both ends.

- b. The contractor (and its subcontractor) shall provide the following material:

BOE-TEL to provide:

- (1) 450 feet of Corning 12-strand plenum MIC singlemode fiber cable (370-948-SMODE-12) (B1100)
- (2) 450 feet of Corning 6-strand plenum MIC multimode fiber cable (370-949-FDDI-6) (B1100)
- (3) 250 feet of Corning 12-strand plenum MIC fiber cable (370-948-SMODE-12) (B1200)
- (4) 210 feet of Corning 12-strand plenum MIC fiber cable (370-948-SMODE-12) (B1200)
- (5) 120 each Avaya level 7 solid copper cords (CPC3482-04F30)
- (6) 108 each cool cure consumables (142172)
- (7) 75 each Velcro ties
- (8) 72 each Avaya level 7 solid copper cords (CPC3482-04F20)
- (9) 72 each P3020A-C-125 singlemode ST connectors (157475)
- (10) 72 each C3000A-2 singlemode ST couplers (105263)
- (11) 48 each Avaya level 7 solid copper cords (CPC3482-04F10)
- (12) 40 feet of Corning 12-strand multimode plenum MIC cable (370-949-FDDI-12) B1105)
- (13) 36 each P2020C-C-125 multimode ST connectors (170290)
- (14) 36 each C2000A multimode ST couplers (088987)
- (15) 30 each Caddy J-hooks (184873)
- (16) 30 each D-rings
- (17) 24 packs 110C-4 connectors for 110 blocks (073039)
- (18) 8 each Avaya 10A panels for 200A LIU (088980)
- (19) 7 each Avaya 100-pair terminal block (154069)
- (20) 5 each 2 meter st-sc multi-mode fiber jumper (152012)

- (21) 4 each 1 meter st-st single mode fiber jumper (151986)
- (22) 4 each Avaya 200A LIU (128826)
- (23) 3 each 5 meter st-st single mode fiber jumper (151989)
- (24) 2 each 5 meter st-st multi-mode fiber jumper (129352)
- (25) 2 each 2 meter st-st multimode fiber jumper (139055)
- (26) 2 each Milan multimode 100TX to 100FX SC transceiver MIL-C2413 (225871)
- (27) 1 each 2 meter st-sc single mode fiber jumper (152037)
- (28) 1 each 3 meter st-st single mode fiber jumper (151988)
- (29) 1 each 1 meter st-st multi-mode fiber jumper (129350)
- (30) 1 each Milan media converter 100/155 SM/MM MIL-225C (201020)
- (31) 8 each Milan SM/SC transceiver MIL-RC3113-15 (266752)

- c. Schedule: The completion of this effort shall be (20) twenty weeks after the receipt of a signed Modification.

3. P203 4213 02

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to replace Cat3 wiring in B3101 with Cat6 wiring and install singlemode fiber cable between B2310 and B3101 to support new GFE network hub as outlined in OAO proposal dated February 11, 2004.

- a. The contractor (and its subcontractor) shall perform the following tasks:

OAO to work

- (1) Place fiber cross connects at B3101, B2310 and B1201 to activate the new GFE network hub.
- (2) Cutover existing PC's from old network hub and Cat3 wiring to new GFE network hub and Cat6 wiring.
- (3) Update database.
- (4) Update network drawings.

BOE-TEL to work:

- (1) Install (2) Cat6 wires to (43) locations.
- (2) Install (1) 12-strand singlemode fiber cable from B2310 to B3101.
- (3) Install (1) flush wall mounted bracket to hold new GFE network hub.
- (4) Install (2) Visipatch panels to terminate Cat6 wiring and network ports on.
- (5) Terminate fiber into ST connectors on both ends.
- (6) Test and label Cat6 wiring.
- (7) Test and label fiber at both buildings.
- (8) Provide OAO with redline drawing showing jack numbers and locations.
- (9) Remove all old wiring after OAO does cutover from old hub to new hub.

- b. The contractor (and its subcontractor) shall provide the following material:

BOE-TEL will provide:

- (1) 16,000 feet of Avaya plenum 2071 level 7 wire (CMP-00424MAX-7U-06)
- (2) 100 each Velcro ties
- (3) 86 each T568A/B Cat6 jack green (246746)
- (4) 86 each 14 feet Cat6 station cords (MM14-AV7E-04) green
- (5) 50 each Caddy J-hooks (184873)

- (6) 48 each Avaya level 7 solid copper cords (CPC3842-04F15)
- (7) 43 each Avaya M14I-262 faceplate (197613) white
- (8) 24 each cool cure consumables (142172)
- (9) 24 each P3020A-C-125 singlemode ST connectors (157475)
- (10) 24 each C3000A-2 singlemode ST couplers (105263)
- (11) 20 each Avaya visipatch distribution rings (532421)
- (12) 18 each Panduit outlet boxes (201336)
- (13) 6 each Panduit LD5 raceway (131156)
- (14) 4 each Avaya 10A panel for 100A LIU (088980)
- (15) 4 each Avaya 100A3 LIU (146050)
- (16) 2 each Avaya 336-pair visipatch (532210)
- (17) 2 each Avaya visipatch horizontal duct (539650)
- (18) 2 each Avaya 112 pair visipatch (542990)
- (19) 1 each flush mounted wall bracket (156033)

- c. Schedule: The completion of this effort shall be (8) eight weeks after the receipt of a signed Modification.

4. **P203 4213 04**

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to replace Cat3 network wiring with Cat6 wiring and replace Cat3 telephone wiring with new Cat3 wiring in B2108 as outlined in OAO proposal dated February 17, 2004.

- a. The contractor (and its subcontractor) shall perform the following tasks:

OAO to work:

- (1) Network technician will install and configure new GFE Cisco network hub.
- (2) Network technician will install singlemode fiber jumpers in B2108 and B2204 to activate new hub.
- (3) Network technician will remove old multimode fiber jumpers in B2108 and B2204 to deactivate old network hub.
- (4) Network technician will place cross connects to (3) computers that are presently still in the building along with (1) network printer. All other ports will be done when OWEB orders are received when new people move in.
- (5) Telephone technician will re-cross connect existing telephone ports to new telephone wiring

BOE-TEL to work:

- (1) Install (1) sheet of plywood on south wall.
- (2) Install (2) plenum Cat6 wires to (50) locations and terminate on visipatch panels.
- (3) Install (1) plenum Cat3 wire to (50) locations and split into (2) jacks.
- (4) Install (4) visipatch panels on the south wall.
- (5) Install (96) solid copper cords from GFE network hub to visipatch panel.
- (6) Install (1) LGX panel in existing equipment rack.
- (7) Relocate fiber from LIU's on wall down to new LGX mounted in equipment rack.
- (8) Terminate spare fibers into ST connectors and place in new LGX.
- (9) Install cable tray from north wall over equipment rack to south wall.
- (10) Relocate video cable so that visipatch panels can be installed.
- (11) Test and label Cat6 wiring at both ends.

- (12) Test and label fiber cable at both ends that were terminated in B2108.
- (13) Remove all old wiring.
- (14) Provide OAO with redline drawing showing jacks numbers and locations of jacks.

b. The contractor (and its subcontractor) shall provide the following material:

- (1) 21,000 feet of Avaya plenum 2071 level 7 wire (CMP-00424AVA-7U-06)
- (2) 10,000 feet of Avaya plenum Cat3 wire (CMP-00424MAX-3U)
- (3) 100 each MGS400bg-226 modular jack (246746)
- (4) 100 each Velcro ties
- (5) 96 each Avaya level 7 solid copper cords (CPC3482-04F030)
- (6) 92 each M1BH-318 level 3 jack (240709)
- (7) 75 each 14 feet Cat6 station cords (MM14AV7E-04) green
- (8) 50 each Avaya M14L-262 faceplate (197613) white
- (9) 25 each 25 feet Cat6 station cords (MM25-AV7E-04) green
- (10) 24 each Avaya visipatch distribution ring (532421)
- (11) 14 each cool cure consumables (142172)
- (12) 12 each Panduit outlet boxes (201336)
- (13) 8 each P3020A-C-125 singlemode ST connectors (157475)
- (14) 8 each C3000A-2 couplers (105263)
- (15) 6 each P2020C-C-125 multimode ST connectors (170290)
- (16) 6 each C2000A multimode ST couplers (088987)
- (17) 4 each Avaya 336-pair visipatch (532210)
- (18) 2 each Avaya visipatch horizontal duct (539650)
- (19) 2 each CPI 12" wall angle support (034158)
- (20) 2 each 2-meter singlemode ST/SC fiber jumper (152037)
- (21) 2 each 2-meter singlemode ST/ST fiber jumper (151987)
- (22) 1 each CPI 12" cable runway (034636)
- (23) 1 each LST1U-072/7 termination shelf (106722)
- (24) 1 each 1000ST panels for LST1U-072/7 (106730)
- (25) 1 sheet of ¾" x 4' x 8' of plywood

c. NASA will provide the following material:

- (1) Cisco 4500 network hub

d. Schedule: The completion of this effort shall be (8) eight weeks after the receipt of a signed Modification.

5. XGJC 4491 00 Rev 1 (dually funded with XJDE 4491 00)

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install fiber cable between B5100 and B9801 to provide telecommunications and network connections to B9801 for NASA as outlined in OAO proposal dated January 13, 2004. This infrastructure upgrade is dually funded with SWR XJDE 4491 00. For contractual reasons SWR XGJC 4491 00 Rev 1 shall be considered the SWR of record. Therefore any reference to SWR XJDE 4491 00 shall be considered SWR XGJC 4491 00 Rev 1.

a. The contractor (and its subcontractor) shall perform the following tasks:

OAO to work:

- (1) Install one Catalyst 3550 24 SMI in building 9801.
- (2) Provide a GigE uplink to core switch in building 1201 via single mode fiber,
- (3) Install one UPS.
- (4) Update drawings
- (5) Update security plan
- (6) Update databases
- (7) Install (1) UMC chassis equipped with hardware and software to allow the Module Distributed ITE controller for the digital phones to work. Also the UMC chassis will have POTS circuit cards for the analog phones and fax machines. This will be installed in B9801.
- (8) Install (1) Module, T1 Distributed ITE 23-port 1-pair unit with associated hardware and software in B9801 to be used to provide digital phone service.
- (9) Place fiber cross connects to activate the UMC chassis from B1201 thru B5100 to B9801.
- (10) Place copper cross connects to activate the Module T1 Distributed ITE 23-port from B1201 to B9801.
- (11) Install (1) 48 volt power supply for the UMC chassis and Module T1 Unit in B9801.
- (12) Install (2) 110 wiring blocks for the UMC and Module T1.
- (13) Terminate 25-pair copper cables from UMC and Module T1 to 110 wiring blocks.
- (14) Test the UMC and Module T1 once the wiring and power have been connected.

BOE-TEL to work:

- (1) Core drill the manhole so that 4" schedule 80 PVC duct can be placed into manhole.
- (2) Make road bore and place (1) 4" conduit under road going into B5100.
- (3) Trench and install (1) 4" schedule 80 PVC duct from manhole to the nearest concrete power pole using the new duct under the road.
- (4) Install (1) 3/8" galvanized steel strand on new pole route that starts at B5100 and runs to B9801.
- (5) Install (1) 4" schedule 80 PVC duct from concrete pole to B9801 and place weatherproof junction box on outside of building.
- (6) Install (1) 12 multimode/24 singlemode fiber cable from B5100 out thru existing duct bank to manhole by Main Line Road.
- (7) Install fiber cable listed in item (6) above on strand installed in item (4) above from Main Line road to pole by B9801.
- (8) Install (1) 19" x 84" aluminum equipment rack and (2) vertical double sided troughs in B9801.
- (9) Install (1) LGX panel in B5100 and (1) in B9801.
- (10) Install 110 wiring blocks for telephone and network jacks in B9801.
- (11) Install (1) sheet of 3/4" x 4' x 8' plywood to mount 110 wiring blocks for telephone, network drops, UMC chassis and FDLN ports.
- (12) Terminate fiber into ST connectors and place in LGX panels in B5100 and B9801.
- (13) Install (2) Cat6 and (2) Cat3 wires to (6) locations in B9801.
- (14) Install (2) Cat3 wires to (1) location in B9801 for wall phone.

- (15) Install (2) Cat3 wires from 110 wiring block out to pedestal and terminate on 10-pair station protector installed in item (16) to be used for phone in B9800.
- (16) Install (1) 10-pair station protector in pedestal by B9801 and (1) in pedestal by B9800.
- (17) Splice 10-pair copper cable that runs between buildings to each station protector.
- (18) Test and label fiber cable.
- (19) Test and label Cat6 wiring.
- (20) Test and label Cat3 wiring.

b. The contractor (and its subcontractor) shall provide the following material:

OAO to provide:

- (1) 1 each 10 meter singlemode FCPC/ST fiber jumper (FSMD-2266-10M)
- (2) 3 each 2-meter duplex singlemode fiber jumper (151987)
- (3) 2 each 5-meter duplex singlemode fiber jumper (152039)
- (4) 2 each 3-meter duplex singlemode fiber jumper (152038)
- (5) 6 each 50 feet 25-pair cable e/w SE male connector (143745)
- (6) 1 each Advance Fibre CBA CON-C channel bank assembly (0210-0033)
- (7) 1 each Advance Fibre Central Processing Unit (CPU2 Ver8.0) (0101-0027)
- (8) 2 each Advance Fibre fiber optic transceiver (F0-XCVR) 0120-0040)
- (9) 2 each Advance Fibre LET POTS Unit (L-POTS) (0110-0150)
- (10) 1 each Advance Fibre Remote Sub. PWR Supp (R-SPSU) (01010-0006)
- (11) 2 each Advance Fibre RST POTS unit (R-POTS) (0110-0196)
- (12) 2 each Advance Fibre T1 ASYNCH.CHNL (DSX) T1AX) (011-0193)
- (13) 1 each EADS cable, MDF PVC 25-pair w/180 degree AMP connector (500 1274 002) EADS
- (14) 1 each EADS cable, T1/IXL/PRI plenum, bail latch, telco/RJ48, 50 feet (500 1691 050)
- (15) 1 each EADS Card, T1 Distributed ITE controller w/license (885 0005 351)
- (16) 1 each EADS Module, T1 Distributed ITE 23-port 1-pair w/license (885 0025 352) EADS
- (17) 1 each EADS software base system 100 user port licenses (885 0251 000)
- (18) 1 each EADS software option, ISDNNET, 100 user port licenses (885 0251 040)
- (19) 2 each Marconi cabinet, rectifier, V6CAB with MCA & AC (58213210010)
- (20) 2 each Marconi PCU, -48V, 3AMP (486532000)
- (21) 12 each Marconi GMT fuse

BOE-TEL to provide:

- (1) 6,800 feet of Corning 12mm/24sm fiber cable (036XW4-TBD)
- (2) 6,000 feet of stainless steel lashing wire (003610)
- (3) 5,000 feet of 3/8" galvanized strand (159634)
- (4) 1,000 feet of Avaya 1071 Cat3 wire (CM-00424AVAE-7-06)
- (5) 1,000 feet of Avaya 1010 Cat3 wire (CM-00424MAX-3U)
- (6) 85 feet of pipe for bore under road
- (7) 85 feet bore under road
- (8) 72 each cool cure consumables (142172)
- (9) 65 each 4" schedule 80 PVC conduit
- (10) 60 each stainless steel straps (039522)
- (11) 50 each lashing wire clamps (003230)

- (12) 50 each 110C-4 connector (073039)
- (13) 48 each P3020A-C-125 singlemode ST connectors (157475)
- (14) 48 each C3000A-2 singlemode ST couplers (105263)
- (15) 46 each square washer (004149)
- (16) 24 each C2000A-2 multimode ST couplers (088987)
- (17) 24 each P2020C-C-125 multimode ST connectors (170290)
- (18) 24 each Avaya level 7 solid copper cords (CPC3842-04F030) green
- (19) 23 each cable suspension clamp (003256)
- (20) 23 each thru bolts 14" (003813)
- (21) 23 each square nut (003927)
- (22) 20 feet of #6 ground wire
- (23) 15 each Caddy J-hooks (184873)
- (24) 14 each M1BH-318 level 3 jack (240709)
- (25) 12 each MGS300BH-226 modular jack (246746)
- (26) 12 each 14 feet Cat6 station cord (MM14-AVA7E-04)
- (27) 10 each 4" schedule 80 couplings
- (28) 8 each McLean 3/8" strand vise 003296)
- (29) 8 each cable marking post
- (30) 7 each M16L-246 faceplate (197617)
- (31) 6 each Panduit outlet boxes (207089)
- (32) 6 each 50 feet 25-pair cable e/w SE male connector (143745)
- (33) 5 each Mclean 3/8" stranlink (006566)
- (34) 5 each 4" 90 degree bends
- (35) 5 each Avaya 100-pair terminal block (154069)
- (36) 3 each Caddy clips (157703)
- (37) 2 each LST1U-072/7 termination shelf (106722)
- (38) 2 packs 1000ST fiber panels (106730)
- (39) 2 each thimble eye nut (003904)
- (40) 2 each guy hook (002755)
- (41) 2 each Marconi 10-pair protector (RPT-10PA-4)
- (42) 2 each double sided vertical trough (166031)
- (43) 2 each 6-inch buried fiber optic detectable tape (251465)
- (44) 1 each APC UPS SU420NET (193858)
- (45) 1 each 4" core drill
- (46) 1 each 4" rigid pipe
- (47) 1 each 4" rigid coupling
- (48) 1 each 4" locknut
- (49) 1 each 4" bushing
- (50) 1 each 18" x 18" x 8" weatherproof junction box
- (51) 1 each sheet of 3/4" x 4' x 8' plywood
- (52) 1 each 19" x 84" aluminum equipment rack (143592)

c. NASA will provide the following material:

- (1) 1 each GFE Catalyst 3550 24 SMI network hub
- (2) 2 each GFE Cisco Gbic-LX

d. To enable completion of this task:

- (1) NASA will have two anchors set so that BOE-TEL can place guy wires. BOE-TEL will provide locations.
- (2) NASA will provide a closet to house the communications equipment and provide keyed lock similar to other communications closets.
- (3) NASA will provide electrical circuits in the new closet for the network hub, UMC and Module Distributed ITE.

e. Schedule: The completion of this effort shall be (12) twelve weeks after the receipt of a signed Modification.

6. Part II "Contract Administration Data", Item 4, is revised as indicated below to incorporate the increase of \$172,236.95 for this infrastructure upgrade:

ESTIMATED TOTAL (Contract Item 4) (through Mod 113)

Ordered Seats and Services	\$ 10,552,446.48
Catalog Actuals	\$ 658,182.03
Specialized Services Actuals	\$ 224,346.72
Infrastructure upgrades	\$ 3,083,345.54
Fast Track Mods Authorized	\$ 42,610.29
Subtotal	\$ 14,560,931.06
Less credits	\$ (2,625.55)
Less retainage not earned	\$ (33,905.56)
Subtotal	\$ 14,524,399.95
Seats/service levels projected through 11/30/04	\$ 3,075,752.64
Total Estimated Delivery Order Value	\$ 17,600,152.59

7. Part V "Technology Infusion (Infrastructure Upgrades)", Item 2 is modified to include the subject infrastructure upgrades. The signed date and completion date will be completed in a future infrastructure upgrade modification.

Mod No.	Description	Date Signed	Date Completed	Amount
113	P203 4212 F5 Install 24-port 10/100 network switches to accommodate Victim/Guest Network connections in buildings B1100S 1 st and 2 nd , B1100 rooms C116, 203, 306H and 345, B1105 rooms C313 and F604, B1200 room 204D and B4220, level 5			\$34,225.78
113	P203 4213 02 Replace Cat3 wiring in B3101 with Cat6 wiring and install singlemode fiber cable between B2310 and B3101 to support new network hub			\$26,895.03
113	P203 4213 04 Replace Cat3 network wiring with Cat6 wiring and replace Cat3 telephone wiring with new Cat3 wiring in B2108			\$31,903.12
113	XGJC 4491 00 Rev 1 Install fiber cable between B5100 and B9801 to provide telecommunications and network connections to B9801 for NASA			\$79,213.02

8. Payment Schedule: Invoicing and Payment for this modification will be made in accordance with Master Contract NAS5-98144, FAR 52.212-4: Commercial Items (May 1997) (Modified).
- The following payment schedule is applicable for SWR XGJC 4491 00 Rev 1 only. The remaining infrastructure upgrades effort shall be paid upon completion of the effort and acceptance by the ADOCOTR or designee.
 - Upon receipt of material and acceptance by the ADOCOTR or his designee, the contractor may invoice for \$42,119.24
 - At the completion of this infrastructure upgrade and acceptance by the ADOCOTR or his designee, the contractor may invoice for the balance, \$37,093.78
9. Reporting requirements: The contractor shall provide monthly status reports to the SSC Alternate DOCOTR, with a copy to the DOCO. These reports shall include, as a minimum, installation progress, and potential problem areas.
10. In consideration of the modification agreed to herein as complete equitable adjustment for the changes set forth, the Contractor hereby releases the Government from any and all liability under this delivery order for further equitable adjustments attributable to such facts or circumstances giving rise to these changes.
11. All other terms and conditions of this Delivery Order remain unchanged and in full force and effect.